

Buena Vista Coalition
Cawelo Water District
East San Joaquin Water Quality Coalition
Kaweah Basin Water Quality Association
Kern River Watershed Coalition Authority
Kings River Water Quality Coalition
Sacramento Valley Water Quality Coalition
San Joaquin County/Delta Water Quality Coalition
Tule Basin Water Quality Coalition
Westlands Water Quality Coalition
Westside San Joaquin River Water Quality Coalition
Westside Water Quality Coalition

March 13, 2015

Pamela C. Creedon, Executive Officer
Central Valley Regional Water Quality Control Board
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

SUBJECT: Nitrogen Management Plan Technical Advisory Work Group – Detailed Description

Dear Ms. Creedon,

The purpose of this letter is to provide you with a detailed description of the Nitrogen Management Plan Technical Advisory Work Group (**NMP TAWG**) that will be convened by the Central Valley Water Quality Coalitions (**CV Coalitions**) listed at the top of this letter (the California Rice Commission is not included). Our description details the following:

- a) Purpose of the Work Group.
- b) Questions or issues to be addressed by the Work Group.
- c) Composition of the Work Group.

This letter is in response to the Central Valley Regional Water Quality Control Board (**Regional Board**) requirements listed in your letter titled “Third-Party Group Requirement to Submit Crop Nitrogen Knowledge Gap Study Plan” (February 19, 2015).

a) Purpose of the NMP Technical Advisory Work Group

A NMP TAWG will be formed to assist the CV Coalitions to develop appropriate guidelines for reporting nitrogen fertilizer use information as it relates to crop consumption and need. This information will be the basis for the “Nitrogen Removed” metric included in the Nitrogen Management Plan Template approved by the Regional Board on December 23, 2014.

It is expected that for many crops the information needed to understand “Nitrogen Removed” will be lacking or minimal. Therefore, the NMP TAWG will develop a Crop Nitrogen Knowledge Gap Study Plan (**Study Plan**) describing the current understanding of crop nitrogen uptake and removal,

recommended methods for calculating nitrogen removal that will be provided to Member growers and how any identified knowledge gaps associated with crop nitrogen uptake and removal will be addressed. This Study Plan will be submitted by December 18, 2015.

b) Questions and Issues to be Addressed by the Technical Advisory Work Group

To assist with the development of the Study Plan, the NMP TAWG will review and address the following:

1. Determine the currently available scientific knowledge of nitrogen removal or consumption for the crops planted on the majority of acreage in the Central Valley.
2. Determine if there are different metrics that should be used for annual and perennial crops.
3. NMP Item 13 - Determine what crops have established crop removal or consumption formulas.
4. NMP Item 13 - Determine if available methodologies can be used to estimate unestablished nitrogen removal or consumption of other crops with similar characteristics.
5. NMP Items 16 & 17 - Determine the methods to estimate the amount of available nitrogen from dry or liquid fertilizer applications or foliar nitrogen sources.
6. NMP Item 19 - Provide the appropriate estimation methods for the amount of available organic nitrogen in manure, compost, cover crops, or other organic amendments.
7. NMP Item 22 - Recommended method(s) to estimate the amount of residual nitrogen in the soil available for the current crop year.
8. NMP Item 23 - Recommended method(s) to estimate the nitrogen available in irrigation water.
9. Determine what elements of the Nitrogen Management Plan template should be included in the NMP Summary Report.
10. Provide an appropriate phased schedule for the reporting of crop removal of nitrogen or similar metric.
11. Establish how the Study Plan results will be disseminated to growers.
12. Provide a work plan and milestone schedule for addressing any identified knowledge gaps and the rationale for any proposed prioritization.
13. Identify the relationship and associated timelines between the Study Plan, the Management Practices Evaluation Program, and the California Department of Food and Agriculture's Fertilizer Research and Education Program.

Between April and September 2015, the NMP TAWG will meet regularly to discuss these items and develop the Study Plan (see page 4 for schedule of meetings). A repository of guidance documents will be developed during this time that can be used by growers when filling out a Nitrogen Management Plans.

If guidance documents are not available, the NMP TAWG will provide a proposed time line and work plan for developing the appropriate guidance documents.

By December 18, 2015 the Third-Party Groups will submit to the Regional Board references to the guidance documents that growers and their certifiers are being directed to use in the preparation of the NMPs, as well as a timeline and work plan for developing the appropriate guidance documents that are not available yet.

By December 18, 2015 the Third-Party Groups will provide the Study Plan to the Regional Board.

c) Work Group Members:

The Technical Advisory Work Group will consist of coalition representatives and various experts who understand nitrogen dynamics, crop need, and crop uptake. Subgroups may also be formed to focus on specific questions. Members of the Work Group include but will not be limited to:

1. Coalition Representatives
2. California Department of Food and Agriculture (**CDFA**) Representatives
3. Agronomists from the University of California
4. Practicing Agronomists
5. Crop Experts

The Work Group will extend an invitation to Regional Board members and staff to attend specific meetings.

Below is a list of confirmed participants followed by a list of invited participants. In April, the confirmed participants will determine an organization chart including a lead for the NMP TAWG.

Confirmed Participants:

Name	Representation	Affiliation
Parry Klassen	Coalition	East San Joaquin Water Quality Coalition
Mike Wackman	Coalition	San Joaquin County and Delta Water Quality Coalition
Nicole Bell	Coalition	Kern River Watershed Coalition Authority
John Schaap	Coalition	Kern River Watershed Coalition Authority
Bruce Houdesheldt	Coalition	Sacramento Valley Water Quality Coalition
Joseph McGahan	Coalition	Westside San Joaquin River Water Coalition
Greg Hammett	Coalition	Westside Water Quality Coalition
Donald Ikemiya	Coalition	Kaweah Basin Water Quality Association
Charlotte Gallock	Coalition	Westlands Coalition
Casey Creamer	Coalition	Kings River Water Quality Coalition
David De Groot	Coalition	Tule Basin Water Quality Coalition
Tim Ashlock	Coalition	Buena Vista Coalition
Dan Munk	Research Agronomist	University of California, Cooperative Extension
Lowell Zelinski	Practicing Agronomist	Precision Ag
Joel Kimmelshue	Practicing Agronomist	Land IQ
John Guerard	Practicing Agronomist	Grimmway Enterprises, Inc
David McEuen	Crop Expert	JG Boswell Co / FREP Board
Dennis Tristao	Crop Expert	JG Boswell Co
William Jones	Practicing Agronomist	CURES
Charles Rivara	Crop Expert	California Tomato Research Institute, Inc
Bob Klein	Crop Expert	CA Pistachio Research Board
Joe A. Voth	Practicing Agronomist	Paramount Farming Company
Bob Hutmacher	Research Agronomist	UCCE, State Cotton Specialist
Bob Blakely	Crop Expert	California Citrus Mutual
Barzin Moradi	Crop Expert	California Department of Food and Agriculture
Charles Rivara	Crop Expert	CA tomato Research Institute
Chris Valdez	Crop Expert	CA Fresh Fruit Association
Lee Waddle	Practicing Agronomist	Advanced Agronomic Consulting
Renee Pinel	CDFA Representative	Western Plant Health Association

Invited Participants:

Name	Representation	Affiliation
Blake Sanden	Research Agronomist	UCCE
Nathan Heeringa	Practicing Agronomist	Innovative Ag Services
John Dickey	Practicing Agronomist	Plantierra
Dave Ramos	Crop Expert	CA Walnut Board
Gabrielle Ludwig	Crop Expert	Almond Board of CA
Patrick Brown	Research Agronomist	UC Davis
Ben Nydam	Practicing Agronomist	Dellavalle Laboratory, Inc.
David Smart	Crop Expert	UC Davis

Sincerely,

The Undersigned Central Valley Water Quality Coalitions

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Nitrogen Management Plan

Technical Advisory Work Group

2015 Time Line

- March 16** **TAWG Work Group Description to Regional Board**
- **Third Party participants**
 - **Purpose of Work Group**
 - **Questions/Issues to be addressed by the Work Group**
 - **Composition of the Work Group**
- March Meet/call with Regional Board on Work Plan
- April Technical Work Group Meeting #1
- What is the current state of knowledge on N removal for the top 10 crops in the Central Valley?
 - What is the current state of research on N removal from crops without known N removal rates?
 - Invitees: CV Coalitions, agronomists, researchers, crop specialists
- May Technical Work Group Meeting #2
- Review compilation of N Removal knowledge
 - Evaluate available estimates for use across the Central Valley
 - Can estimates be used for similar crops?
- June Technical Work Group Meeting #3
- Review requirements of NMP Summary Report
 - What can be reported in year one?
 - What can be reported in year five?
 - Should N removal be reported by growers or by coalitions?
- July Prepare Draft NMP Summary Report for 2016
- Include timelines and approach for implementing N Removal for all crops
 - Ask for comments from interested Stakeholders
- August Comment Deadline
- Review comments and suggestions
- August Technical Work Group Meeting #4
- Review comments and suggestions
 - Modify NMP Summary Report for 2016
- September Send Suggested NMP Summary Report to Central Valley Coalitions.
- Central Valley Coalitions will forward the Work Group findings to the RB staff
- December 18** **Reference to Guidance Documents for Growers**
Crop Nitrogen Knowledge Study Plan